

# THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

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**ARTICLE I.** *Report of the Surgical cases treated at the Pennsylvania Hospital during the months of May, June, July, August, September and October, 1838.* By **GEORGE W. NORRIS, M. D.**, one of the Surgeons to the Hospital.

FROM the first of May, 1838, to the first of November following, there entered the surgical service of the Pennsylvania Hospital, exclusive of syphilitic diseases, 256 patients.

Of this number 140 were discharged cured; 36 were relieved, removed by friends or eloped; 24 died; and 56 remained under treatment 1st November.

The following list exhibits the diseases and injuries met with, as well as the number of cases of each, which came under notice:

Abscess, - - - -	3	Epistaxis, - - - -	1
Aneurism, - - - -	1	Eruptions, papular, - - - -	3
Burn, - - - -	6	Fistula in perineo, - - - -	2
Bladder, inflamed - -	1	Fracture of jaw, - - - -	1
Cancer of lip, - - - -	1	Fracture of cranium, - - - -	6
Cancer of mamma, - -	1	Fracture of spine, - - - -	1
Caries of the wrist, - -	1	Fracture of ribs, - - - -	4
Caries of sternum, - -	1	Fracture of acromion, - - - -	1
Cirsocele, - - - -	2	Fracture of clavicle, - - - -	5
Congestion of brain, -	1	Fracture of olecranon, - - - -	1
Concussion of brain, -	1	Fracture of scapula, - - - -	1
Contusions, - - - -	19	Fracture of arm, - - - -	8
Coxalgia, - - - -	1	Fracture of elbow, - - - -	1
Dislocations of hip, - -	2	Fracture of fore-arm, - - - -	5
Dislocations of shoulder, -	4	Fracture of finger, - - - -	1
Compound dislocation of ankle,	1	Fracture of thigh, - - - -	7
Dislocation of radius, - -	1	Fracture of patella, (old) - -	1

Fracture of leg, simple, -	19	Paronychia, - - -	6
Fracture of leg, compound, -	5	Psoriasis, - - -	1
Fracture of bones of the foot, -	3	Poisoned by arsenic, - - -	2
Compound fracture of knee joint, -	1	Sprians, - - -	7
Un-united fracture of arm, -	1	Stone, - - -	1
Incomplete fracture of leg, -	1	Tinea capitis, - - -	1
Furunculus, - - -	1	Testes, enlarged, - - -	3
Gangrene of cheek, - - -	1	Tonsils, enlarged, - - -	1
Hæmorrhoids, - - -	1	Ulcers, - - -	11
Hæmatocele, - - -	1	Ulcers varicose, - - -	3
Hernia, - - -	2	Ulcers of throat, - - -	1
Hernia, strangulated, - - -	1	Wounds, incised, - - -	11
Herpes, - - -	2	Wounds, lacerated, - - -	23
Hydrocele, - - -	1	Wounds, gun shot, - - -	5
Inflammation of arm, - - -	4	Eye, diseases of, - - -	
Inflammation of leg, - - -	4	Conjunctivitis, - - -	9
Inflammation of knee, - - -	3	Ulcers on cornea, - - -	6
Inflammation of ankle, - - -	1	Cataract, - - -	3
Inflammation of glands of the neck, -	1	Iritis, - - -	3
Knee, ruptured ligament of, - - -	1	Pistula lachrymalis, - - -	1
Necrosis, - - -	2	Fungus hæmatodes of, - - -	1
Nose, ulcerated, - - -	2	Amaurosis, - - -	2
Orchitis, - - -	2		

The accompanying table will show the diseases or injuries which terminated fatally; the length of time which the patient survived after admission, and the immediate cause of death.

Disease for which admitted.	Period survived.	Immediate cause of death.
1. Incised wound of face and head,	7 days,	Delirium tremens.
2. Compound fracture of leg,	7 days,	Delirium tremens and mortification of limb.
3. Epistaxis,	4 days.	Delirium tremens.
4. Burn.	Less than 24 hours,	No re-action. Patient æt. 86.
5. Stab in abdomen,	Less than 24 hours,	Internal hæmorrhage.
6. Fracture of cranium,	2 days.	Compression of the brain.
7. Fracture of thigh,*	Less than 24 hours,	Delirium tremens.
8. Fracture of cranium,	39 days.	Abscess of brain and hernia cerebri.
9. Poisoned by arsenic,	Less than 24 hours,	Effects of poison.
10. Fracture os calcis,	4 days.	Delirium tremens and mortification of limb.
11. Congestion of the brain,†	Less than 24 hours,	Congestion of the brain.
12. Comminuted fracture of upper and lower jaws,	4 days,	Effusion on the brain.
13. Compound fracture of leg.	4 days,	Delirium tremens and mortification of limb.
14. Lacerated and fractured legs,	Less than 24 hours,	No re-action.
15. Fractured cranium,	Less than 24 hours,	Compression of the brain.
16. Stone in the bladder,	36 days,	Peritoneal inflammation.
17. Fractured cranium,	4 days,	Compression of the brain.
18. Gangrene of the cheek,‡	5 days,	Gangrene.

\* Produced by jumping from a third story window, while labouring under an attack of delirium tremens.

† Picked up in the street in a state of insensibility, and conveyed to the Hospital; probably the combined effect of exposure to the sun and free drinking.

‡ A child æt. 8, following the use of mercury.

Disease for which admitted.	Period survived.	Immediate cause of death.
19. Fractured Spine,	4 days,	Peritoneal inflammation.
20. Contusions,	Less than 24 hours,	Effects of injury.
21. Wounded scalp,	3 days,	Delirium tremens.
22. Gun shot wound of abdomen,	2 days,	Peritoneal inflammation.
23. Burn,	Less than 24 hours,	Burn.
24. Fractured thigh, æt. 80.	84 days.	Exhaustion.

From the above tables it will be seen, that of the surgical diseases treated at the Pennsylvania Hospital, a considerable number are cases of recent injury. Of these, a large proportion consists of fractures of the extremities, and for many years past, dressings of the simplest kind have been made use of in their treatment, with good success. For the thigh the straight position is preferred, and a modification of the apparatus of Desault is that generally employed. The modification consists in the greater length of the outer splint, and the attachment to its lower end of a small block, over a notch in which the extending band passes, in order that the extension be made in a line with the axis of the limb. No short splints or bandages of any sort are applied immediately to the thigh, as they prevent an accurate examination of the state of the fracture, and require that the limb should be disturbed in order to re-apply them. A long narrow bag, stuffed pretty firmly with cotton, and covered with buckskin, is used for the counter extending band, and a double buckskin gaiter, with a thin layer of carded cotton laid over it, or a buckskin band lined with linen, is made use of for extension.

In the treatment of fractures of the leg, as in those of the thigh, no splints or bandages are applied directly to the leg. The limb is placed in a fracture box, upon a well stuffed pillow, previously covered by a thin oil cloth, in such a way as to make the sole of the foot come in contact with the foot board. The fractured bones are then accurately adjusted, and the sides of the box are tied together moderately tight. The foot is securely fastened to the foot-board by means of a strip of bandage, in order to prevent its falling to either side, and the pressure of the pillow is, in the vast majority of cases, quite sufficient to retain the fragments in their natural position. The foot-board of the box is set into its bottom nearly straight, and is made to project beyond the foot, in order to prevent the toes from falling downwards, and thus cause a projection forwards of the upper end of the lower fragment.

Severe inflammation so frequently follows these fractures, in consequence of most of them being accompanied with much contusion, that measures are invariably taken ab initio to lessen its severity. These consist in the application of cooling lotions to the limb, and attention to position, elevating the fracture box or foot of the bedstead. It is to prevent the pillow from becoming wet and unpleasant when the evaporating lotions are applied, that the oil cloth is placed above it. In order to obviate deformity in these fractures when they occur at the lower part of the leg, it is highly important to keep the

foot well forwards, and this is best done by placing under the heel some layers of carded cotton.

At the end of five or six weeks the union is generally sufficiently firm to allow of the removal of the limb from the box, and a bandage and pasteboard splints, made to fit accurately the leg by previously soaking them in warm water, are applied to its sides. On these becoming hard, the patient is permitted to move about.

In very oblique fractures of the leg, where the pressure made by the pillow is not sufficient to prevent the recurrence of deformity after its reduction, permanent extension is kept up by means of Desault's splints, as in fractures of the thigh.

Compound fractures of the leg are much more frequent with us than compound fractures of any other part. When not so severe as to call for immediate amputation, the wound is carefully cleansed, and its sides accurately brought together with strips of adhesive plaster, and covered with lint, after which the limb is placed in a box, as in simple fractures, without bandages or short splints, and cooling applications made to it. If the wound unites by the first intention, which, however, is exceedingly rare, the treatment is continued; and in cases where this does not happen, if the suppuration which follows is moderate in quantity, the same treatment is pursued with the addition of a poultice laid over the part.

During the six months included in this report, seven cases of fracture of the thigh came under treatment, all of which, with one exception, (an old woman of 80,) were treated by the apparatus above mentioned. In two of the cases ulcers about the heel occurred; in one, (a boy,) from the pressure of the extending band; and in the other, from the constant violent efforts made by the patient to drag up his limb, and rid it of the apparatus, during a severe attack of delirium tremens.

Delirium tremens is not an unfrequent attendant upon the cases of recent injury admitted into our wards, and when occurring in connection with a fractured limb, is uniformly attended with much danger to the patient. Of one hundred and forty-three cases of recent injuries treated, twenty-one were attacked with delirium tremens, and several others were threatened with it. Of the twenty-one seized with it, seven died, and fourteen recovered. In the class of cases mentioned, it usually shows itself in less than 36 hours after admission, and from the period of its setting in, little or nothing can be done in the way of treatment for the fracture. We have found the best method of managing a simple fracture of the leg or arm during an attack, to be to remove all dressings from the limb, and envelope it in a pillow. This should be large and well stuffed, and should be bound tightly around the limb by means of a roller. The elasticity of the feathers is such, that no danger of making too much pressure on the part need be entertained, and it will be found to hinder all motion, and to keep the fragments in apposition better than any more complicated apparatus. The treatment which we have found

most successful in cases of delirium tremens, has been the free use of opium in the early stages, grs. ij. or iij., every two hours, together with nourishing soups, and the moderate use of stimuli. The latter are generally given in the form of porter, or tonic and antispasmodic tinctures. In the latter stages of the disease, when the pupil becomes contracted, we either omit, or very considerably diminish, the quantity of opium, and apply large blisters to the back of the head and neck.

*Compound fracture of the Tibia and Fibula. Delirium Tremens. Gangrene. Death.*—John Anderson, ætâ! 39, entered August 10th, for a compound fracture of both bones of the left leg, near the middle, produced by the passage of the wheels of a rail-road car over the part. When admitted he was much prostrated, and had not recovered from the effects of intoxication, in which state he was at the time of the accident. A lacerated wound existed on the inner side of the leg, five inches in length, through which the bones projected, and there was considerable contusion of the whole limb. A small vessel which gave out some blood was taken up, and the sides of the wound were brought together with strips of adhesive plaster, and covered with dry lint; after which the many-tailed bandage was lightly applied, and the limb placed in a good position in a fracture box. On the following day the leg was much swelled, and there was some oozing of dark-coloured blood from the wound, which was not disturbed. Skin clammy; pulse very frequent and feeble. Opium, tinct. valerian, milk punch, and nourishing soups freely.

12th. Slept a part of last night; a good deal of thin bloody discharge from the wound during the night and this morning; pulse has not risen in strength or fulness; is restless, and has tremors and other incipient symptoms of delirium tremens. Fracture box elevated, and the limb with the dressings undisturbed, enveloped in bran. Blister to the back of the neck. Opium and stimuli continued.

13th. Pulse 130 and feeble; delirium continues; numerous vesications, filled with bloody serum upon the leg; knee much swollen, and of a dark-red colour; thigh swollen, of a dusky hue, and painful when pressed upon. A fermenting poultice was applied to the leg, and the thigh was bathed with soap liniment. Mist. Carb. Amm., oil, in addition to former treatment.

14th. Sinking; leg gangrenous. Death at 4 P. M.

The preceding is an example of one of those bad fractures accompanied with great contusion and laceration of the soft parts, which are not unfrequently received at the hospital from some of the neighbouring rail-roads, and will make known the class of patients we are often called upon to treat. The severity of the injury was such, that even had his constitution been good, it might have been doubtful whether efforts to save the limb would have been followed by success. In a patient of Anderson's habits, the pro-

bability of doing so under like circumstances was slight indeed, and amputation would have been proposed, had he at any time been in a condition to have permitted it. Inebriated when admitted, and almost without life, from the severity of the shock given to the system by the accident, the operation was at that time utterly inadmissible, and with all our efforts to stimulate, we could not succeed in bringing him any where near to that state at which it might have been undertaken with any prospect of success.

*Fracture of the Os Calcis. Delirium Tremens. Gangrene.*—Frederick Burgoin, *ætat.* 35, was admitted August 2d, at 5 A. M., for an injury of his right leg, which he had received on the previous night, either by falling or jumping from the third story of his dwelling, while in a state of intoxication. Upon examination some swelling and ecchymosis were found to exist about the ankle, particularly over the external malleolus, but there was no fracture of either bone of the leg. A fracture of the os calcis was recognised by the presence of crepitation, but there was no displacement of the fragments, or injury to the other bones of the foot. A small lacerated wound, from which there had been a slight hæmorrhage, existed at the bottom of the heel, but did not communicate with the fracture. The wound was dressed with a strip of adhesive plaster, lint, and a roller moderately tight, and the limb was afterwards placed in a fracture box. The patient had been bled previous to admission, and was stated by his wife to be a free porter drinker, but not an habitual drunkard. His extremities being cold, and pulse very weak, he was stimulated after admission, and the catheter was made use of on account of retention of urine. Some hours after entrance, the roller was loosened in consequence of his complaining of pain in the foot, and opium was administered freely.

3d. Had but little sleep during the night, and was very restless; leg and foot very hot, and is much swelled about the ankle and at the heel; is delirious; pulse about 130, and thready. Limb elevated, and cooling applications made to it. Opium and stimuli, consisting of brandy toddy and mist. carb. ammon. continued.

4th. Delirium continues; profuse sweating; pulse as yesterday; foot and leg hot; parts around the wound in the heel discoloured and crackling on pressure; thin dark-coloured sanies discharged from it. Fermenting poultice to the foot and heel. Carb. ammon., milk punch, essence of beef, opium.

5th. Slept a part of the night; has had sick stomach this morning; pulse 134; the whole of the heel is black and crackling; calf of the leg and foot are of a dark-yellowish colour, and hot; glands of the groin are swollen and painful, and the skin covering them reddened. Bowels have been moved this morning by injection. Tympanitis. Fermenting poultice and stimuli continued; cold to the swelling in the groin.

6th. No sleep. This morning the skin covering both buttocks was found

to be discoloured and crepitating on pressure, evidently gangrenous; thigh and leg hot. Mortified spot of leg has not increased in size; skin of body and upper extremities cool; delirium; head hot; pulse thready; same treatment, with cold cloths to head, and fermenting poultice to buttocks.

7th. Death at 3 P. M.

Examination of the foot showed the os calcis to be fractured in two places in its anterior part; no displacement of the fragments existed: and no injury of the surrounding bones was discovered.

Fractures of the os calcis are not often met with, and are generally produced as in the case just given, by falls from a height upon the foot. The most certain diagnostic mark of this accident, the drawing up of the posterior fragment by the tendo Achillis, was wanting, and the fracture was recognized only by the crepitus which existed. This is the more remarkable, as the patient in his delirium threw the muscles of his leg strongly into action, and can only be explained by supposing the seat of fracture to have been further forwards than is generally the case; or from the fragments having been held together by the aponeurotic covering of the foot. Some of our authorities look upon displacement as a necessary consequence of the accident, and most of them direct the leg to be flexed upon the thigh, and the foot extended upon the leg so as to enable the fractured surfaces to be brought into apposition, and to be retained in this position by means of a curved splint, or the slipper of Petit. The present instance is interesting, as showing that the fracture may exist without any sort of displacement, requiring for its treatment repose of the limb only.

*Compound Fracture and Depression of the Cranium. Hernia Cerebri.*—Catherine Kittinger, ætat. 37, was admitted July 13th, for an injury of the head. It was stated by the persons, who conveyed her to the hospital, that a short time previous to entrance she had slipped while descending a flight of steps with a bucket of water, and struck her head against the edge of one of them. On examination, a ragged wound about three inches in length was found on the right side near the junction of the temporal and parietal bones. The bone immediately beneath the wound was broken into two or three pieces and driven in upon the brain. She was said to have lost much blood, but when I saw her the bleeding was principally from beneath the depressed bone and was not great. No symptoms of concussion or compression of the brain existed. No paralysis. An attempt was at once made to raise the depressed portions of bone by means of the elevator, but these were so firmly jammed in as to make it impossible until after the application of a small trephine. A perforation was made with this on the upper part of the exposed sound bone, after which, the portions driven in upon the brain were readily removed. The dura mater was found to be slightly wounded and a branch of the middle artery was divided. There was no effusion of blood between the dura mater and bone, and on raising

the latter the hæmorrhage almost ceased. A small strip of lint was placed over the divided vessel and the wound was lightly covered. The pulse rose and the patient, through an interpreter, stated her pain to be less after the removal of the bone. Perfect quiet; absolute diet; cold to head.

14th. Is without fever or pain in the head; slept well; pulse moderate; pupils natural; states herself to be four months gone with child.

16th. No pain in the head; pulse not excited; slight erysipelatous swelling of the scalp around. Simple dressings to wound; diet and cold to head continued.

17th. She was purged with calomel.

19th. The erysipelatous appearance had disappeared and she continued doing well till night, when she was observed to wander in her mind.

20th. She complained of soreness of the wound, which, however, looked well and discharged healthy pus. Skin pleasant; some heat of head; pulse moderate both in force and frequency; pupils natural; tongue clean; is correct in her replies to questions; simple dressings and cold to the head continued; towards evening she had a return of her delirium and a twisting of the mouth and tongue to the left side was observed. Emp. vesicat. to back of the neck; injection.

21st. Delirium continues but is not violent; rested badly; twisting of mouth and tongue continues but has not much increased; cannot raise up her left arm from the bed or seize anything with her hand; no paralysis of lower limb; calomel in small and repeated doses, combined afterwards with minute portions of opium, in order to prevent its operation upon the bowels.

23d. She continued in the same state as on the 21st; the blister on the back of the neck not being very sore a second was applied extending up upon the head.

25th. Yesterday and to-day patient has been much better; twisting of the mouth is scarcely perceptible; is free from delirium and pain; gums slightly sore; has partially regained the use of her arm, being able to raise it from her bed and to move slightly the fingers; wound looks well and is closing rapidly. Dressings of simple cerate continued, and nit. argent. applied to the edges of the wound; calomel and cold to head omitted; bowels freely moved.

August 1st. Since the last date the patient continued steadily improving; yesterday a slight degree of puffiness or elevation at the wounded part was observed, which has to-day increased; pulsation at that part is also stronger; has to-day less power over the left arm than on the 25th; is exceedingly feeble; takes freely of mucilaginous articles of diet and milk; pressure, just sufficient to give that degree of support to the part which it should naturally receive from the dura mater and bone, to be made with an adhesive strip.

4th. The swelling and pulsation at the wounded part continue the same; is free from delirium though more dull; paralysis of left upper extremity has been again gradually increasing; perfect command over lower extremity; tongue clean; appetite good and she complains of her debility; pulse very



feeble; within the last two days has at times passed her urine involuntarily; soreness of the wound, but no pain in the head. Bowels freely opened by injection; milk, gruel, and weak broth.

9th. No change since the 4th, except that the swelling on the side of the head has much increased in size since yesterday; it now presents the appearance of a rounded pulsating tumour, elastic to the touch, about the size of a black walnut; no fever, and is correct in her answers. Wound continues to be dressed with lint spread with cerate and the adhesive strip.

12th. The tumour is to-day softer and there is a much more free discharge of healthy looking pus from between the side of it and the scalp than there has heretofore been. A small piece of the internal table of the bone was observed working out at the back part of the tumour and was removed; is free from stupor though dull; urinates in bed without giving notice of it; demands food; paralysis of arm complete and is unable to draw up the left lower limb though she can move it slightly; bowels moved by injection.

16th. The tumor has been gradually increasing in size since last report and is now fully of the size of an egg; no other change except that she sleeps more; is dull but not delirious; pupils natural; appetite good; to-day for the first time complete paralysis of the left lower limb was observed. Treatment continued.

17th. She lay during most of the day breathing hard and almost insensible; right pupil more dilated than the left; both insensible to light; during the night she revived a little and continued without change during the 18th.

19th. Pulse 152 and breathing very hurried; sleeps deeply but can be roused; right pupil continues more dilated than that of the left side; complete paralysis of the left side continues; the tumor has gone on increasing slowly and was judged to be nearly the size of a small orange; at its top a small discoloured pulpy spot is visible, which is evidently the commencement of sloughing. From this period she lingered on till 3 A. M. of the 21st, when she died. I was not present at the autopsy, but examined the fungus mass on the following day, after it had been hardened by immersion in spirits. It took its origin in the cerebrum which it resembled in consistence and appearance, and was protruded through the opening in the dura mater which had been observed after raising the fractured portions of bone. A large and deep abscess existed in the cerebrum at the side of the tumour and nearly the whole of that side of the brain was disorganized.

*Fracture of the Cranium, Recovery.*—William Wagner, ætat. 23, entered July 29th, 1838. A short time previous to admission he had been knocked down by an axe falling from the top of a three storied house and striking him upon the head. Upon examination, a cut, four inches long, was found to exist on the top of the head over the left parietal bone, accompanied by a fracture in that bone to the extent of two and a half or three inches. There was no splintering or depression of the bone. The patient had been stunned

by the blow, but soon recovered, and the scalp bled freely; pupils natural; pulse 64 and weak. After shaving the head the sides of the wound were drawn together by adhesive strips and dry lint, and a bandage applied; absolute diet; a few hours after entrance, when reaction was fairly established, he was bled twice, to the amount of about 3xxxv., and had ice applied to his head; calomel grs. xij. at bed time.

30th. Passed a good night, and is without pain; pulse 80 and moderately full; calomel has operated freely. Cold to head to be continued, and mixt. neutral with a small portion of antim. tartar. administered; in the evening he was again bled 3xij., and took a purge of calomel and extr. colocynth comp.

31st. Pulse 84 and soft; skin moist; no pain in the head. The bandage on the head was renewed, but the strips on the wound, which has not united, were not disturbed; treatment continued.

August 1st. Bowels were very freely moved last evening; pulse above 90; skin warm; tongue clean; no pain in the head; gums slightly affected by the calomel. V. S. 3xiv., and other treatment continued.

2d. Pulse 82; skin moist; no pain in the head or soreness about the wound; salivation in a much greater degree than yesterday. Same diet and treatment continued, with the addition of an astringent wash for the mouth.

5th. Pulse 82; no heat of skin or pain in the head; was freely purged yesterday with salts and magnesia; sleep last night was much disturbed by dreams; no delirium; no swelling of the scalp or inflammation around the wound which is suppurating freely. Soft poultice to the head and other treatment continued.

7th. Skin warm and rather dry; some delirium during the night; head hotter; some hæmorrhage from the wound last night in consequence of which the poultice was removed for the time and dry lint applied to it; two dozen leeches to each temple; cold to head; mixt. neutral with tartar emetic continued.

8th. Had a good night; no delirium; no fever; to-day there was a free discharge of fetid pus and a portion of dead tendinous matter was thrown off from the wound, leaving a large portion of bone bare at the bottom of the wound. Poultice to head and other treatment continued.

Two days after the last report, leeches were again applied to his temples, after which he went on doing well. On the 1st September, I removed two pieces of bone, which had become loose, from the wound, one an inch in length consisted of the outer table of the bone only, the other somewhat larger was of both tables. Support was given to the brain after the removal of the bone, by means of lint and an adhesive strap. From this date the wound went on cicatrizing slowly, its edges being occasionally touched with the nit. argent. On the 22d, two more small pieces of bone were taken away, and by the 21st of November cicatrization was nearly perfect, and the patient returned home.

*Ununited Fracture of the Humerus. Application of Caustic to the Ends of the Bone. Cure.*—Charles Southwick, ætat. 28, was placed under my care by Dr. J. Rhea Barton, for the cure of an ununited fracture of the humerus, and was brought into the hospital on the 5th of May. He states that in March, 1834, he slipped from the top of a wagon loaded with straw, one of the wheels of which passed over his left arm and produced a simple fracture in its lower third. The arm was dressed by a surgeon in the usual manner and no union taking place the splints were continued for nearly seven months. In May, 1835, he came to Philadelphia for advice, and remained four or five months under the care of two respectable practitioners. The treatment pursued by these gentlemen consisted in rubbing the ends of the bone one against the other. This was repeatedly done at regular intervals, the fractured ends being afterwards carefully placed in apposition by means of splints and a bandage. Under this treatment the fracture became more firm, though some motion always remained at the part. Six months after his return to Bordentown he was able to carry a small bucket of water for a short distance without much inconvenience, but was never able to pursue any laborious occupation. In March, 1838, he fell upon the arm, since which time the motion at the point of fracture has increased, and he has been unable to make any use of it.

Upon examination, the fracture was found oblique, the lower end being one and a half inches above the internal condyle, while the upper extremity of it was nearly three inches above that of the outer side. The fragments of the bone overlapped, causing some deformity; very little thickening of the parts about the fracture existed; moving the new joint, even roughly, caused no pain, and it was so very loose as to render the limb perfectly useless to him. The elbow joint was uninjured and its motions perfect. The muscles of the shoulder, arm, and fore-arm, were much wasted. The patient had always enjoyed and was at the time of coming to us in good health, and entered the hospital with the view of submitting to any treatment which would afford a probability of restoring his arm to usefulness.

In consultation it was thought, that, putting out of view the numerous cases in which the seton had failed in cases of very long standing, the close proximity of the fracture to the joint, and the risk there would be of wounding the ulnar nerve and artery by passing a seton between the fragments precluded in this instance the trial of this mode of cure, and it was determined to cut down upon the part and apply the caustic potash to the extremities of the bone.

This was done on the 16th, four years and two months after the receipt of the accident. An incision on the outer part of the arm three inches long anterior to the triceps muscle, and commencing a short distance above the internal condyle was made so as to expose fairly the seat of fracture. Two small vessels in the dense structure around the seat of injury were divided by this, and bled freely; these were secured by ligature and the thickened

cellular substance connecting the two extremities of the bone was then cut through and the wound carefully dried, after which a stick of caustic potash was freely rubbed over them *until a black eschar was formed*. The ends of the bone were in close apposition at the inner side of the arm, but were found to be separated about a fourth of an inch at the external part over which the incision was made, and were perfectly rough. The wound was then tightly filled with lint, and put at perfect rest by means of a rectangular splint applied to the inside of the arm.

The day following the operation, the patient complained of pain in the limb, caused by the tightness of the bandage, which together with the splint was removed, and the arm placed in a carved splint with a poultice over the dressing. After this change the arm became easy. On the 19th the lint had become perfectly loose and was removed from the wound. No redness of skin or swelling about the wound; some soreness but no pain; wound black at bottom; red at edges; slight discharge from wound.

20th. Arm more sore; slight redness of skin about the edges of the cut; discharge not large; both ligatures were seen to be lying loose and were removed; no swelling; poultice continued.

21st. Hæmorrhage from the wound last night to the amount of  $\text{℥iv.}$  or  $\text{℥v.}$ ; the part was carefully examined but no vessel was to be seen; to-day it is perfectly clean with red healthy granulations at its bottom, and in every respect looks well; wound tightly covered with dry lint, with very moderate pressure upon it and the poultice omitted; carved splint continued, and gtt. xxx. tinct. opii in the evening. At 8 P. M. there was a renewal of the hæmorrhage to the extent it was judged of  $\text{℥xij.}$  or  $\text{℥xv.}$  The dressings were removed and the wound carefully sponged out, when a small vessel situated immediately below the skin was seen to give out blood and was secured by ligature. Very accurate examination made known no other bleeding vessel, but there was a general and rapid oozing from the whole surface of the cut; the wound was then filled accurately and closely with layers of dry lint, after which a bandage was applied from the hand upwards, making firm pressure on the part and perfect rest secured to the limb by applying a rectangular splint to its inner side; laudanum gtt. lx. to be repeated every three hours if no sleep.

22d. Took one dose of laudanum; passed a good night; no pain in the arm; bandage over wound is very slightly discoloured by the oozing from the wound. Perfect quiet enjoined with a diet of gruel, laudanum to be repeated at night.

25th. At 11 A. M. the bandage was carefully cut off as low as the elbow, in order to make an exit for the pus which was in large quantity and extremely fetid, the skin around the incision was slightly reddened. The lint with which it was stuffed was not disturbed, but a compress of fresh lint was laid over the part, and the arm again secured to the splint by means of the many tailed bandage. At half past 2 P. M. there was a recurrence of

hæmorrhage which was arrested by dry lint and pressure. In the evening the hæmorrhage again returned to such an extent as to require the application of the tourniquet to restrain it; the dressings were now all removed as well as the lint with which the wound was stuffed. The wound itself presented no appearance of sloughing. On loosening the tourniquet, a general oozing of blood from the bottom and sides of the wound occurred, but, with the exception of two small ones near the surface, no vessels could be discovered pouring out blood. The ends of the bone were still rough and not covered by granulations; the vessels were secured by ligature, and pure kreosote was applied freely to the whole surface of the wound by means of a camel's hair pencil; the kreosote appeared at once to constrict powerfully the vessels of the whole surface of the wound and caused a cessation of all oozing from it; the wound was then firmly filled with dry lint and moderately strong pressure made over the part by means of a roller, the arm being again placed upon a splint. Opium gr. i., every six hours.

*June 2d.* Since last report has continued doing well; the bandages having been daily clipped a little for the purpose of making a free exit for the pus, which is of good quality and discharged in large quantities. No pain; no return of hæmorrhage.

*8th.* Portions of lint with which the wound was filled have been daily removed, and to-day the last of it was taken away. Wound looks well and discharges thick healthy pus; the ends of the bone are completely covered by granulations. Very little inflammation around the wound; general symptoms good; bowels regular. Simple dressing; splint continued.

*23d.* Allowed to move about; sides of the wound have been for some time past drawn together with adhesive plaster and the granulations repressed by means of the nitras argent. The point of fracture was to-day carefully examined and the ends of the bone found to be still moveable.

*July 12th.* Wound entirely cicatrised. Within the last ten or twelve days the fracture has become much firmer. Bandage to arm, and from the hand up, and angular board splint to its inner side continued.

*21st.* The fracture daily becoming firmer, he left the hospital and returned to his family at Bordentown, the arm being still splinted.

After this date he came to the hospital weekly for the purpose of having his arm examined and dressed. His general health which had suffered slightly during his residence there improved after his return to the country, and by the 25th of August the union had become perfectly firm and the splints were omitted. On the 21st of November he last presented himself. At this time he had recovered in a great measure the use of his elbow and fingers which had become stiff during the treatment. The humerus continued firm; was perfectly straight and the limb was daily becoming stronger and more useful.

The different methods of cure for artificial joint have all at different times been much vaunted by practitioners, and as might be expected, have all in

some instances been followed by failure. The most ancient and simplest mode of treatment for such cases, that of rubbing together the ends of the bone, had in Southwick's case failed, though carefully and perseveringly pursued during a period of some months. The next most simple plan of procedure to this, is assuredly that of passing a seton between the fragments; but besides that, this could not have been safely ventured on in the case just given, on account of the close proximity of the ulnar artery and nerve to the seat of fracture: examination of the records of surgery show, that this method has often entirely failed in those instances in which the bone has been for years disunited. In these latter cases, excision of the ends of the bone, and the application of caustic after free exposure of it, are the means most to be relied upon. The first of these, besides being a much more formidable operation, and productive of more pain and danger than the latter, would have been in the highest degree difficult, if not altogether impossible, in the case before us, from the nearness of the false joint to the elbow. The application of caustic potash to the extremities of the fracture in the manner detailed, was, so far as I am aware of, first used by Mr. Cline, of London. Mr. Earle afterwards, in 1821, made use of it in two instances, though without success; one of these was in a case of ten months' standing, in which the seton had previously failed. After the application of the caustic, callus was deposited, and the limb became much stronger, but this was afterwards absorbed. The fracture in his second case (produced by the lifting of a tea-pot) was of nine years' standing, and occurred in a patient "worn out with mercury," in whom nearly every cylindrical bone in the body was diseased; a case evidently unfitted for any operation. The caustic has been successfully used in three or four cases by Dr. J. R. Barton, of this city, in one of which, (following a compound fracture of the leg, of 16 or 18 months standing,) Dr. Physick himself discouraged the employment of the seton from fear of its failure. It was at Dr. Barton's suggestion that I made use of it with Southwick, and from the ease with which the operation can be done, the little pain attendant upon it, and the almost certainty of producing by it a degree of action in the parts sufficient to excite a deposit of callus, without at the same time keeping up that action so long as to cause excessive suppuration, which often leads to failure, I am induced to prefer it to excision of the ends of the bone, and would recommend it in those cases which are rebellious to the simpler modes of treatment. The several hæmorrhages to which Southwick was exposed during his treatment, cannot in any way be urged against the method. The bleeding was not the consequence of the division of any vessel by the direct application of the caustic, or separation of sloughs formed by it, but consisted in a general oozing from the surface of a granulating wound. Every practical surgeon must have witnessed the peculiar tendency to these secondary losses of blood in particular constitutions, and the same state of things which happened in this instance after the application of the caustic,

would most probably have occurred had a simple incision been made for a removal of the ends of the bone. The powerful effect in arresting the oozing of blood from the granulations, by the application of pure kreosote, is worthy of note; its action was immediate, and not productive of pain. It may perhaps be well to state, that neither in the cases reported by Mr. Earle, nor in those of Dr. Barton, did any hæmorrhage occur, and since Southwick's case, I assisted Dr. Harris in the performance of a similar operation on the humerus, in which none had place.

*Compound Fracture of the Femur. Firm union after three and a half months. Necrosis of upper fragment. Removal of the sequestrum 6½ inches in length, at the end of 15 months.*—William Pearce, seaman, ætat. 21, was admitted on the 13th of June, 1837, for a compound fracture of the left femur, near its middle, produced three days previously by a fall from the upper rigging of a ship upon the deck. The wound was at the outer part of the limb, and the upper fragment projected.

Upon his first coming into the house, his limb was placed in a good position, in a long fracture box, and dry bran applied in such a way as completely to surround and envelope it. This was used with the view of effectually absorbing the discharge which was great, at the same time that it kept up a moderate and equable degree of pressure, and could be removed with the aid of a spatula or syringe, and re-applied without causing pain or disturbing in any degree the limb.

On the 19th of July, the discharge having much diminished, the bran was dispensed with, and the limb was placed in the box upon a pillow, with a poultice to the wound. His sufferings at this period were extreme; appetite not good; heavy night sweats; pulse ranging from 90 to 100; tongue clean; no diarrhœa: the limb was much swelled about the wound, which looked healthy, the granulations being florid and secreting pus of a good quality. Opium, with tonics and a nourishing diet, was freely given.

*August 12th.*—General symptoms have much improved; no sort of union has taken place, and there is great lateral projection of the upper fragment of the bone, with a considerable discharge of pus; he bears better the dressing of his limb, his sufferings having much abated. To-day the fracture box was exchanged for Hartshorne's modification of Boyer's apparatus for fracture of the femur, in order that moderate extension might be made. The many-tailed bandage being first applied above and below the seat of fracture, with the view of preventing the pus from travelling. The apparatus employed was chosen on account of the facility of dressing which it allowed, it being so constructed that the outer splint may be removed, and the dressings re-applied, without in any way disturbing the extension which is kept up.

*October 1st.*—Thigh much improved, being less swelled and straighter; union is now perfectly firm, the limb being three inches shorter than that of the right side; wound has become closed, with the exception of a small fis-

tulous opening, through which a piece of bone can be felt, deprived of periosteum, which gives a hollow sound when knocked against, and is apparently of considerable length; sufferings slight in comparison to what they have previously been, and general health greatly improved. Splint is to-day laid aside, and the limb again placed in a fracture box.

On the 18th of October an incision was made over the point of fracture for the purpose of removing the necrosed bone, but upon laying bare the part it was discovered, that, though free and loose at its lower end and sides, it was still firmly adherent at its upper part. Under these circumstances it was thought best not to remove any part of it, but to leave it as a handle, whereby the whole portion might be hereafter taken away; very little inflammation followed the operation.

On again taking charge of the wards in May, 1838, I found Pearce still in the house, much improved in general health. The opening on the outside of his thigh still existed, and the bone could be felt rough for some inches above the point of injury, but was not moveable. In the latter part of July it became loose, but owing to its being closely surrounded by new bone, it could not be taken away by the forceps. On the 15th of September an incision four inches long was made on the outer part of the thigh, over the necrosed bone, and the parts on either side dissected to a small extent, so as to expose the new shell of bone which had been formed, as well as the necrosed part so far as uncovered. Portions of the new shell, which was thick and very dense, were now successively cut away with Hey's saw, a chisel and trephine, after which the dead piece was removed with the aid of a strong forceps. The portion removed was six and a half inches in length, and embraced the whole shaft of the bone. The cavity was stuffed with lint, and the sides of the incision drawn slightly together with adhesive strips. By the 17th the wound was suppurating kindly, and the lint was removed. When I left him, Nov. 1st, the cavity was gradually filling up; general health was improved; the thigh had become straighter and presented a more natural appearance.

*Fracture of both Bones of the Leg. Delirium Tremens. Sloughing. Amputation. Cure.*—Isaac Wheter, an intemperate weaver, ætat. 40, entered September 14th, for a compound fracture of the right leg. The fracture which was occasioned while the patient was intoxicated, by a dog seizing hold of his leg and causing him to fall, was very oblique and situated about two inches above the ankle. Two or three small lacerated wounds existed around the seat of fracture occasioned by the teeth of the dog, and considerable oozing of blood occurred. The limb was placed in a fracture box and enveloped in bran; tinct. valerian and an assafetida mixture with laudanum was directed for him, with nourishing soups and gruels for diet. On the 15th, the leg was red and hot and cold applications were made to it. On the 17th, vesications filled with bloody serum existed about the seat of injury, and the patient



was restless; had tremors and was watchful. His medicines were continued and an increased quantity of laudanum was given to him without, however, producing sleep.

18th. Has been highly delirious all night and continues so this morning, dragging his leg up and throwing it about violently; limb very red and tense. Treatment continued with the addition of milk punch and a large blister to the back of the neck; towards night the pupils became more contracted and the opium was omitted.

19th. Blister has drawn well and his pupils are less contracted; has had no sleep, and makes constant efforts to drag his leg from the apparatus in which it is confined. Tinct. opii. gtt. lxxv. were now given him every two hours and another larger blister applied to the back of the head; milk punch and soups continued. On the nights of the 19th and 20th the patient slept, and by the 21st was perfectly tranquil and free from delirium; the whole leg was now ecchymosed from the knee downwards, greatly swelled about the ankle, red and hot. It was gently and repeatedly bathed with soap liniment and an evaporating lotion applied to the ankle. A large collection of matter was afterwards discharged from the point of fracture, and the soft parts around sloughed. He was now put upon a generous diet with porter and the free use of quinine. In the early days of October the discharge of pus increased in quantity, and the patient's appetite began to fail; he had, moreover, night sweats, repeated chills and a tendency to diarrhœa. Amputation was now recommended to him after a consultation, and was done on the 6th; the circular operation at the place of election was performed and the sides of the stump were brought together obliquely. On examination of the limb after its removal, a small fragment of the tibia was found to be completely separated from the under part of the upper fragment, and a longitudinal fissure existed in the lower fragment, extending from the point of fracture down to the joint; the fibula was also found to be fractured at its extreme end and in its upper part, as well as on a level with the injury of the tibia. The patient bore the operation well. His general health improved after it, and at the time of my relinquishing the wards, the wound had nearly cicatrized.

*Compound Fracture and Dislocation of the Foot. Immediate Amputation. Cure.*—Peter M'Ghegan, ætat. 66, was brought in from the Columbia rail road on the morning of the 22d of October, in consequence of a compound fracture and dislocation of the left ankle, with great laceration of the soft parts; produced by a car passing over the limb. The foot was almost separated from the leg and the lower part of the latter was greatly lacerated, the integument being torn up as high as the calf. A short period after his admission, reaction having fairly come on, amputation below the knee was performed, (circular,) and the wound dressed to heal by the first intention. For the first ten days after the operation the stump did not present a very favourable appearance, the skin being reddened and a large discharge of

thin, dark-coloured and fetid pus occurring from it; at the end of this time, however, the inflammation diminished and the discharge lessened, and he ultimately did well.

*Lacerated Wound of the Hand and Wrist. Sloughing. Amputation.*—Samuel Jackson, ætat. 39, was admitted on the evening of August 14th. He was an attendant upon a steam drug mill and received his accident by having his hand dragged in between two heavy rollers. On the ensuing morning the limb presented the following appearances:—A longitudinal wound on the back of the fore-arm, about five inches in length, with the integuments on either side detached from the muscles beneath to a slight extent; the soft parts of the palm of the hand much lacerated; the flexor tendons being exposed, and the first and second metacarpal bones separated for some distance; the skin slightly torn up from the thumb and fore-finger, and the phalanges of the ring and middle fingers comminuted; no fracture of the bones of the fore-arm or metacarpal bones; the whole fore-arm as high as the elbow much swollen; the skin about the wrist of a dusky red colour with vesications upon it; a good deal of blood was stated to have been lost previous to his entrance, but all hæmorrhage ceased after the application of adhesive strips and lint to the parts. The patient was strictly temperate in his habits, and after a consultation it was determined to amputate the middle and ring fingers, and make an effort to save the hand. This was at once done, and the wounds were afterwards again done up with adhesive plaster, dry lint, and a splint, placed upon a pillow and slightly elevated, with lead water applied to the upper part of the arm.

Under this treatment things went on well for a day or two. After this period profuse suppuration took place, and the integuments of the palm of the hand and those surrounding the wrist to a considerable extent sloughed. A poultice was applied to the part till after the separation of the sloughs, when the bran dressing was employed and a nourishing diet and porter, together with the free use of opium and quinine. For some time even after the separation of the sloughs the ulcerated surface presented a healthy florid aspect, and the discharge of pus diminished; but, ultimately, large collections of matter formed beneath the skin on the under part of the arm, extending up above the elbow, as well as over the metacarpal bones of the hand which communicated with the wrist-joint. The patient now suffered from hectic, and had become emaciated and much debilitated. His appetite too began to fail; pulse frequent and feeble; no diarrhœa. As he had now evidently begun to sink under the irritative fever, it was determined in consultation to amputate above the elbow.

On the 12th of September the arm was removed below the insertion of the deltoid, by the circular operation; three ligatures were applied and union by the first intention attempted. His health improved rapidly after

the operation. On the 21st, the ligature of the humeral artery came away, and on the 31st of October he was discharged.

*Rupture of the External Lateral Ligament of the Knee. Cure.*—Jno. Divine, labourer, ætat. 20, admitted May 31st. A short time before admission a bank of earth had fallen in upon him while at work, striking the outer part of his right knee, and carrying his leg forcibly inwards. The pain at the time of the accident was severe, and all power of motion was at once lost. Upon admission he complained altogether of his knee, which was slightly swollen. The heads of the femur and tibia could be distinctly traced, and, as well as the patella, were uninjured. Upon raising the limb and holding firmly the lower end of the femur, the leg could be pushed considerably inwards, and a separation between the extremities of the femur and tibia at the outer side of the joint was very evident, which disappeared upon the force applied to the leg being discontinued. No shortening of the limb or crepitus existed, but great pain was caused by the least motion of the part.

In order to preserve the part in a state of perfect rest, the limb was placed in a long fracture box, and under the use of cold applications, followed by leeches to the knee, the pain abated, and the swelling in a few days disappeared. Towards the middle of July it was found that there was still an undue degree of lateral motion at the outer side of the knee, and with a view to hasten the deposit of new matter from the vessels, a blister was applied over this part. Some improvement followed this, and a second and a third application of the remedy was made at short intervals, with decided benefit. In the latter part of August he was suffered to move about, a soap plaster and a roller being applied, in order to give support to the knee, and on the 15th of September he was discharged cured.

*Oblique Fracture of the Head of the Tibia. Severe Injury.*—John Beatty, ætat. 23, entered July 15th, for an injury which he received the day previous, by a bank of earth falling upon him, and at the time of the accident he was unable to rise or make any use of his limbs. A physician in the country who saw him, applied a bandage and after which he was sent to the hospital, a distance of 20 miles. Upon admission he was suffering great pain, and the bandage and splint were removed. The whole limb as high as the groin, was much swollen, very hot. The knee joint was distended, and the slightest motion of the parts about it produced great suffering. The limb was placed in a long fracture box, and cooling lotions applied to it, and the patient, who was robust and of a good constitution, was bled to fainting. Leeches were afterwards twice freely applied around the knee, and he was purged, the cold applications being continued. By the 23d the inflammation had subsided, though some swelling still existed at the knee; examination now showed a

good deal of unnatural motion about the joint, and on close inspection the tibia was found to be fractured obliquely through its head. The treatment was continued with the pillow and fracture box, till August 26th, when, the limb appearing perfectly strong, the box was omitted and a bandage applied, and on the 15th of September he was discharged cured.

The bad effects arising from the early application of tight bandages to fractured limbs are not unfrequently witnessed in our wards, in patients arriving from the country. The practitioner at a distance, in these cases, in order to render the patient more easy during his ride to the city, dresses the limb, and mostly in order to make the apparatus perfectly secure, applies his bandages somewhat tightly, without taking into account the length of time which must elapse before the patient can arrive at the hospital, and the swelling which will occur after such accidents, particularly when the seat of fracture is in the neighbourhood of a joint. The pain caused by this, added to the motion during the journey, soon gives rise, as in the case just noted, to swelling and inflammation, which sometimes adds greatly to the danger of the patient, and always gives rise to much suffering. Several times I have seen sloughing occur in such cases; and in one instance, although the bandage had been applied for less than 24 hours, and was removed immediately upon entrance, mortification of the limb very soon followed, and necessitated its amputation. During the present term several examples of intense inflammation and suffering, arising from this cause, were presented to our notice. In a case of simple fracture of the leg a short distance above the ankle, received twenty-four hours after the occurrence of the accident, from one of the adjoining counties, a tight bandage applied to the leg from the toes upwards, and reversed over short splints, caused a high degree of inflammation, and extensive vesication of the whole limb. The habits of this patient were not very temperate, and I am inclined to think that the severe pain arising from his inflamed limb, by altogether preventing sleep, aided considerably in bringing on an attack of delirium tremens, from which he narrowly escaped with his life. The injurious effects of tight bandaging were presented in another patient, with a simple fracture of the middle of the fore-arm, sent in from the outskirts of the city; a smoothly applied bandage and long splints had been put on immediately after the accident *tightly*, and so great was the inflammation produced, that for some days after his admission it was found necessary to omit all dressings, and confine the patient to his bed, with the arm extended on a pillow, and apply cooling lotions to the part. When fractures are seated in the neighbourhood of joints, and in all cases in which fractures of an extremity occur in the country, in such situations as will prevent it from being frequently visited, it is better to omit the application of a bandage directly to the part at the first dressings, and simply give support to the limb by long splints, well padded with cotton, attached to the member by means of a roller moderately tight. In cases in which dressings are required temporarily, until the patient can arrive at an

infirmary, an excellent plan for the lower limb is to envelope it in a well-stuffed pillow, and secure it with splints on the sides by means of a roller. The elasticity of this will permit swelling to occur without producing pain, at the same time that it will give sufficient support to the part to prevent motion or displacement of the fragments.

The continued application of cold has been used with benefit in several cases of lacerated wounds. The following was the mode of application: The pillow upon which the injured part is placed being properly protected by oiled silk, and the wound covered with lint; and, if necessary, the sides of it drawn together with adhesive plaster, one end of a long strip of lint is placed in a basin of cold water fixed on a table near to and above the level of the part, while the other end is attached to the lint laid over the wound. This, acting upon the principle of a syphon, keeps up a continuous irrigation of the parts, the water being carried off by causing another strip to connect the dressings with an empty basin placed upon the floor. The continuous application of cold in the manner described, has of late been particularly recommended in this class of wounds, by MM. Josse, of Amiens, and Berard, and in hot weather will be found an agreeable and very effectual means of preventing a too high degree of inflammation and its consequence, excessive suppuration.

*Lacerated Wound of the Hand and Wrist. Application of Cold by means of the Syphon. Cure with the loss of the thumb.*—Richard Lancaster, a coloured boy, ætat. 14, was admitted at 9 P. M. of August 22d, for an injury of his left hand, received some hours previously by the bursting of a gun. The soft parts of the palm were torn up, and the flexor tendons below laid bare; the integuments over the inner side of the wrist were much lacerated, and the radial artery exposed for some distance. The thumb was shattered and hanging by a few shreds of tendinous matter only, to the wrist. No fracture of the bones of the hand or fore-arm existed, and the wrist joint was not opened except at the articulation of the thumb. A ligature was placed on the radial artery, and the thumb was removed at its junction with the wrist: the sides of the wound were brought together and covered by lint, after which the hand was laid out upon a splint, and leadwater applied by means of a syphon. The first day or two after the accident the patient had slight fever, and was put upon the use of the effervescing draught. On the 28th the lint and adhesive strips were removed, and the cold application discontinued; some dead tendinous matter was thrown off, and a moderate discharge of pus occurred from the ulcerated surface, as well as from a small abscess on the back of the hand on the succeeding days, after which the granulations presented a healthy florid appearance, the bran dressing being made use of. On the 17th of September the ligature came away, and the wound was dressed with basilicon. By the 31st October cicatrisation was perfect, and the patient was dismissed.

*Lacerated Wound of the Hand from Gun Shot. Cure.*—John Frowart, ætat. 18, entered September 9th, for a lacerated wound of the right hand, produced by the contents of a gun loaded with shot passing through it, the hand having been held over the muzzle. The accident had happened an hour or two before entrance, but the hæmorrhage had not been great. The soft parts of the palm were extensively torn up, and the metacarpal bones of the middle and ring fingers were completely separated. The integuments of the back of the hand were lacerated to the same extent as those of the palm. No fracture existed. The wound was dressed with adhesive strips, and lint, after which the hand was placed on a splint, elevated, and cold leadwater applied to it by means of the syphon. On the 15th the cold lotions were omitted, and a poultice applied; but little swelling of the hand or fore-arm existed; the wound was suppurating kindly and free from pain; general symptoms good. On the 17th the bran dressing was made use of; a short time afterwards this was thrown aside, and basilicon and simple dressings employed; cicatrisation proceeded slowly, and on the 9th November he was discharged cured.

Besides the two cases above given, the continuous application of cold was used with advantage in the following among other instances: A case of very severe contusion of the foot, accompanied with a lacerated wound of the inner side of it, produced by the part being jammed between two rail road cars. Two cases of compound fracture of the great toe, both accompanied with much contusion of the parts. A case of severely lacerated hand from gun shot, in a child ætat. 7.

*Fracture of the Neck of the Scapula. Cure.*—Horatio Singleton, ætat. 21, was admitted, October 27th, in consequence of a fall from the fourth story of a house. The force of the fall had been received upon the left side; the hip and thigh of which were contused. His principal injury, however, was at the shoulder of that side, which was much swollen, and there was an inability to move the arm. The clavicle and spine of the scapula were uninjured; the shoulder was thrown forwards so much as to give at first sight the appearance of a luxation forwards of the head of the humerus, but upon taking hold of the arm the motions of the articulation were found to be perfect, showing that the humerus had not left the glenoid cavity; the humerus too could be traced in its whole extent and was not fractured; upon rotating the arm or pushing backwards the shoulder, the trunk being firmly supported, crepitus was very evident, and the deformity could be made to disappear, but immediately that the force was dispensed with it returned. From the existence of the above symptoms the injury was judged to be fracture of the neck of the scapula. The patient for the first few days was confined to his bed with the fore-arm supported by a sling, leeches and evaporating lotions being applied to the shoulder; afterwards, when the swelling and pain had in a measure subsided, the clavicle apparatus with a pad in the axilla was

made use of. He left the house on the 21st of November, with a useful limb, though with some deformity caused by the falling forwards of the head of the humerus.

*Tearing off of both Thumbs by Machinery, one of them bringing with it the entire Flexor Tendon.*—William Hart, ætat. 22, was admitted October 17th. 24 hours previous to admission his two thumbs had been caught in the machinery of a cotton mill, which he attended, and dragged off from the hand. The right one was separated at the metacarpal joint; the first phalanx of the left thumb was fractured just above its articulation with the metacarpal bone, and completely torn off, bringing with it the tendon of the flexor longus pollicis in its whole length. The hæmorrhage following the accident had been slight; the wounds had been dressed previous to his entering by a gentleman in the country with adhesive strips, and the hands placed upon splints and were not disturbed, cold being applied over the dressings. After a few days' simple dressings were applied, the stumps presenting a good appearance.

Seven cases of *luxation* have been treated during the term. One of these was a luxation backwards of the upper extremity of the radius produced by a fall from a horse upon the hand, which was reduced, and has been reported in the Medical Examiner by the resident, Dr. Smith. Of the four luxations of the humerus three were downwards into the axilla. With two exceptions they were recent and easily reduced. One case produced by a fall while at sea was of ten days' standing, and required the use of the pullies. The patient being very muscular, free bleeding and tartar emetic were, at the same time made use of; the extension was made above the elbow and the bone returned to its socket after fifteen minutes. The second case alluded to was produced by a fall upon the shoulder twenty-one days previously. Some efforts to reduce it had been made, but had been neither violent nor long continued. After being nauseated by tartar emetic, and bleeding, extension was applied by means of the pullies, and the bone restored.

*Luxation upwards and backwards of the Femur.*—B. Jones, ætat. 29, was admitted on the evening of June 15th, for an injury which he had received a short time before by a fall from a height of ten feet. Upon examination his left limb was found to be nearly two inches shorter than that of the opposite side; the knee and toes were turned inwards and a rounded swelling was felt on the dorsum of the ileum, which, on rotating the limb, was found to be the head of the femur. No change of place being produced by the force of two men to the lower part of the limb, the pullies were applied, the extending band being placed above the knee; moderate extension was kept up nearly forty minutes, the patient having been bled and taken a solution of tartar emetic before the head of the femur seemed to

move; at this time the upper end of the bone was pushed upwards by the hand, and it slipped into its socket. On the 27th he was discharged, cured.

*Luxation upwards and backwards of the Femur in a Boy.*—John Buley a stout lad, *ætat.* 11, was admitted at noon of the 26th of August. On the afternoon previous he had fallen from a cart and received an injury of his right hip. By measurement the right limb was found to be one and a half inch shorter than that of the opposite side; the toes and knees were turned inwards and rotation of the limb was impossible; a tumour existed on the dorsum of the ileum, evidently produced by a displacement of the head of the femur. The reduction was at once proceeded to; a folded towel passed under the perineum and fastened to the bed post made counter extension, while extension was made with another attached, by means of a wet roller, above the knee; the steady force of two men applied to the extending band for a few minutes brought down the head of the bone and caused it to enter the acetabulum with an audible snap; all deformity of the limb disappeared, and after being kept quiet for some days he was sent back to his friends.

*Contusion of the Hip. Difficulty of Diagnosis.*—Joseph Whiteman, *ætat.* 8, was admitted on the 6th of August, for an injury of the left hip. It was stated that on the day previous to admission he had fallen upon his hip while at play. This caused him much pain, and some medical gentlemen in his neighbourhood who examined him looked upon his injury as a dislocation of the head of the femur. Strong efforts, kept up for a long time, with the free internal use of tartar emetic, had been made to reduce it. It was further stated that a week or ten days previous to his present injury, the boy had suffered from a fall upon the same part, and that his injury was then also looked upon as a dislocation, and his limb well pulled. Upon examination the pelvis was found to be slightly inclined to the left side, which gave the limb of that side the appearance of being lengthened, but accurate measurement after placing the superior spinous processes on a level showed them to be of the same length. The foot was held in the natural position and the boy could draw the limb up, rotate, and straighten it at pleasure, though these motions were performed very slowly and carefully. The left buttock was evidently much flattened from wasting of the muscles, and this caused the trochanter to be much more prominent than that of the opposite side; no crepitus existed. When placed in the erect position the attitude was that assumed by patients labouring under coxalgia, the boy bearing the whole weight of the body upon the sound limb; considerable swelling existed in the groin, and in a slight degree immediately over the trochanter major, produced probably by the violent pulling which the patient had been made to undergo. The boy was of a highly scrofulous habit and stated upon being questioned that for some time previous to his falls he had occasionally felt pains in the hip and knee of the injured side. The case was looked



upon as one of contusion accompanied by coxalgia in its incipient stage. He was kept quiet in bed; leeches to the groin, and purged. On the 22d of August he was discharged, cured of his contusion, being at that time able to move about as well as before his fall, and free from pain.

The two foregoing cases appear to us worthy of particular note. The first as affording an example of dislocation of the hip at an age in which it is of rare occurrence, the application of a force sufficient to produce it in persons below the age of puberty being most generally followed by a fracture, or separation of the epiphysis and diaphysis of the bone. The last case is well calculated to show the necessity of strict attention, where the diagnosis is at all doubtful, to the history of an accident, as well as of accurate and careful examination of the symptoms supervening upon it. The want of these in the instance noted led to much unnecessary suffering to the patient, and supposing our diagnosis of incipient coxalgia correct, as I think is fully warranted by the history and appearances of the part, cannot do otherwise than exert an unhappy influence on its progress.

*Diseases of the Eye.*—Eighteen patients labouring under ophthalmia were admitted, of whom a large proportion presented the disease in its chronic form. Several of them accompanied by ulceration of the cornea and iritis. The general plan of treatment pursued consisted in repeated general bleeding, low diet, moderate purging, cupping, blisters to the back of the neck and the application of cold mucilage to the eyes. In the chronic cases slightly astringent washes were used, and in two or three instances of very long standing where the conjunctiva covering the lids was much thickened and in a granulated state, a stick of lunar caustic was drawn over the part with much benefit. In the cases of iritis, mercurials were in every instance administered, and in several of the chronic ophthalmias calomel and opium were given with advantage. Ulcers on the cornea were all treated by the nitrate of silver.

*Fistula Lachrymalis.*—Mary Doran, ætat. 35, entered May 9th, for a fistula lachrymalis which had existed some months. The eye was injected and the parts about the opening were considerably inflamed. Cold mucilage was kept to the part till the 19th, when, the inflammation having been subdued, an opening was made into the duct with a sharp pointed bistoury and a style introduced. This she continued to wear with benefit till the 23d, when she left the house and was directed to retain the instrument for some time.

*Fungus Hæmatodes of the Eye.*—Mary P., ætat. 10, entered October 11th. Her parents stated that about two years previously her left eye was observed to be discoloured in its interior and the sight impaired, and that a few months

afterwards vision was entirely lost. About the beginning of September last a small fungus shot out from the part, which has gone on gradually enlarging. At present it occupies the whole orbit, protruding to a considerable extent; is red; irregular on its surface; bleeds on the slightest touch, and is sloughy at its central and prominent part. The patient was of a highly scrofulous temperament; had the lymphatic glands of the left side of the neck enlarged; suffered from pain in the head, with her strength and appetite much impaired. These marks of affection of her constitution by the disease being evident, removal of the part was not recommended, and on the 23d she left the hospital.

*Laceration of the Iris. Ophthalmia.*—Michael Coly, ætat. 31, admitted May 27th, for ophthalmia of the right side. He states that this followed a severe blow, which he received on the ball of the eye, from a stone or lump of clay while engaged in blasting, ten days before he applied for admission. On entrance, the eye presented the following appearances: violent conjunctivitis; sight entirely gone, the anterior chamber being filled with blood; no injury to eyelids or transparent cornea; acute pain in the eye and side of the head; skin cool; health at no time very robust. Mucilages were applied to the eye; he was purged, and a large blister was placed on the back of the neck; calomel gr. ss. three times a day.

*June 6th.* Blister has been excessively sore; all pain has left the eye and the redness of the conjunctiva has nearly disappeared; the blood effused into the anterior chamber has been absorbed with the exception of a small quantity which remains at the union of the iris with the sclerotica at the inner and upper part. The iris is seen to have been torn across in its lower half in nearly its whole extent, and presents somewhat of a triangular opening. He now possesses a considerable degree of sight, being able to see large objects distinctly. Has been salivated by the calomel, and is now using washes of tinct. myrrh and chloride of soda for his mouth, and a slightly astringent wash to his eye. On the 4th of July he was discharged with a good degree of sight, the eye having been free from all redness for some days previously.

*Laceration of the Iris. Ophthalmia. Loss of Vision.*—John Graham, ætat. 30, entered September 17th. Nine days before while engaged in blasting he received a blow upon his right eye, which he states was immediately followed by entire loss of sight. At the time of admission he laboured under acute conjunctivitis, and the iris, which had lost its proper colour and had assumed a greenish hue, was torn across at the inner side near its centre. There was also slight effusion of blood into the anterior chamber, and several minute ulcers upon the transparent cornea. Under a depletory plan of treatment combined with the use of small doses of calomel and opium, and the application of cold to the eye, the inflammation was

subdued, the iris gradually returning to its natural colour, and the effused blood in the anterior chamber being absorbed. On the 27th of October he was dismissed.

*Hydrocele. Injection of Tincture of Iodine. Cure.*—Robert Poursley, labourer, ætat. 31, entered for a fracture of the leg, in the month of May. During the treatment for this, he made known the existence of a swelling on the right side of the scrotum. Upon examination this was found to be tense, elastic, pear-shaped and diaphanous. He stated that it had commenced at puberty, since which time it had been slowly increasing; that he suffered no pain in the part, but was inconvenienced by its weight. The nature of this disease being made known to him, he demanded an operation, and on the 7th of July, after drawing off the fluid, I injected a mixture of tinct. iodine and water, in the proportion of one part of the former to seven of the latter. The injection was suffered to remain but a few minutes, it being withdrawn as soon as pain was complained of. The day following the operation a good deal of pain and inflammation were present; the scrotum was supported by a bag truss, and the patient kept at rest upon his back, on a diminished diet. On the 12th, the pain had nearly left it, and the part had much diminished in size. On the 17th he left the house. Early in August he called to show me his testicle, which was at that time but little larger than natural, soft, and without pain.

One other case of hydrocele of a small size came under notice, in a patient of delicate constitution, ætat. 50. In it the usual injection of warm port wine and water was made use of on the 20th of May; swelling and tenderness of the part for some days followed, but the operation failed to effect a cure. By the 20th of June the fluid had again accumulated in the sac, and the operation was repeated with an injection composed of two parts of the wine to one of water. The inflammation consequent upon this was greater than that produced by the first injection. This gradually subsided, and on the 7th of July he was discharged cured; no re-accumulation of fluid having occurred, and the testicle being of its natural size and feel.

*Cirsocele.*—J. W. ætat. 25, entered July 7th, with cirsocele of the left side. Examined after the patient had been using exercise; the veins of the cord of the left side were found to be nearly of the size of the little finger, and greatly convoluted; the testicle appeared sound. The mind of the patient was dejected on account of his affection, and he complained of severe pain in the loins. The general health being good, the case appeared favourable to a trial of the mode of cure proposed by Davat. On the 14th, after isolating the vein from the artery and vas deferens, (the patient being erect,) I passed an acupuncture needle through the skin, anterior and posterior parietes of the veins; after which I pushed it upwards and forwards in such a way as to make it re-appear at the surface half an inch above the place of insertion,

after a second time passing through the sides of the vessel. The needle was then fixed in this situation by the twisted suture, moderately tight. The operation was done almost without pain, and the patient was afterwards confined to a recumbent position, upon a restricted diet. But little inflammation was produced till the 18th, when the part became more swelled, and caused pain when handled; the vein below the needle being very hard and tense; no pain towards the groin. On the 20th the skin around the needle was slightly reddened. On the 21st the needle was removed, the vein below the point of its insertion being hard and painful on pressure; a hard lump of the size of a large filbert, exists at the point at which it was inserted; no pain up towards the abdominal ring. From this date the inflammation continued to diminish, a drop or two of pus being daily furnished from the points through which the needle had passed; but in a few days this ceased, and on the 1st of August he was discharged cured.

*Cirsocele. Davat's Operation. Cure.*—S. B. ætat. 57, was admitted on the 5th September. The scrotum is so much stretched as to be at once remarked from its extreme length. The testicle of the left side hangs much lower than that of the right, and when separated from the veins which cover it, is found to be both smaller and softer. When allowed to hang without support it gives rise to unpleasant feelings, and the slightest knock or pressure upon it causes severe pain; the veins of the cord appear to increase in size from just below the abdominal ring, and down about the testicle, are much convoluted, irregular, and very large; the swelling is sensibly diminished by placing the patient in a horizontal position, but returns when the erect position is resumed. The patient states that he first noticed his disease about five years ago, since which time it has been gradually increasing, although a suspensory bandage was constantly worn; that a year since he laboured under a hernia of the left side, for the cure of which he wore a truss for some months. At present, even after severe straining and hard coughing, nothing like a protrusion of the bowel exists. He has no pain in the belly or about the ring, and suffers so much inconvenience from his disease, that he entered the hospital by the advice of his medical attendant, for the purpose of undergoing an operation for its cure. On the 19th two acupuncture needles were passed through and through the two largest of the veins, and fastened by means of the twisted suture. After the operation the patient was kept at perfect rest in bed, with the scrotum elevated, and put upon a low diet. Two days afterwards some redness existed immediately around the needles, and on the 24th there was a good deal of swelling and redness of the whole side of the scrotum, accompanied with pain on being handled; slight suppuration too had taken place at the extremities of the needles, and they were both removed; no fever or pain in the groin. Treatment continued, with the addition of lead water to the scrotum. For some days after the last report a drop or two of pus continued to be dis-

charged from the points through which one of the pins had passed. On the 2d October nearly all swelling had left the parts, and the veins were found to be very hard and much reduced in size. By the 5th all inflammation had disappeared, the parts being still more contracted. The patient was now suffered to move about; his diet increased and a smaller suspensor made use of, and a short time afterwards he was dismissed.

The mode of operating adopted in the above cases appears to me much preferable to any of the other methods recommended for the cure of varicose veins, and their results afford additional proof of the safety and efficacy of the plan when carefully applied. The passing of a needle *behind* the vein, and arresting the circulation in it by means of a twisted suture, as recently recommended by M. Velpeau, effects a cure by the pressure causing inflammation and subsequent ulceration, and complete division of the veins; whereas by the method of puncturing the vessel, adhesive matter is at once thrown out around the points irritated, producing the cure by union by the first intention of its internal membrane.

*Incised Wound of the Tendo Achillis.*—Jas. Tobin, ætat. 18, entered May 5th, with an incised wound of the left leg, just below the lower extremity of the tibia. The injury was caused by a carpenter's adze which had entered just behind the tibia, and made an oblique cut three inches long, dividing completely the tendo Achillis and posterior tibial artery, without injuring the joint. Both ends of the artery were secured by ligature, the sides of the wound being afterwards drawn together by adhesive plaster, and the foot extended upon the leg.

The limb was kept in a carved splint upon its outside, and by the 27th cicatrisation had become perfect under the use of simple dressings and occasional touching with the nit. argent. On the 10th of June he was discharged cured, with a slight elevation, and hardening at the point at which the tendon had been divided, the ends appearing to be very nearly, if not entirely in apposition.

Incised wounds of the tendo Achillis are not very common, and the case just mentioned is interesting at this time, from general attention being now directed to division of that tendon as a means of cure for club-foot. It is well calculated to show the safety of that operation, as well as the fallacy of the opinion so long held, that wounds of tendons cicatrise with difficulty, and are peculiarly apt to be followed by serious consequences.

*Cancer of the Lip. Excision.*—James Fairbrother, ætat. 48, admitted on the 28th August. He states that four years since a small spot appeared near the middle of the free edge of the lower lip, which he took for a blood blister, and repeatedly bit off. Gradually a hard lump arose at this spot, which increased slowly, and a short time since ulcerated. After ulceration had commenced, caustic was applied to it by a quack, with the effect of

causing it to progress more rapidly. The ulcer occupies fully two-thirds of the free surface of the lip, extending down towards the chin, its edges being hard and everted, and its surface uneven and angry looking. On the 1st of September a triangular portion of the lip, including the whole of the diseased part, was excised, and the sides of the wound brought together by means of three hair lip pins. The two lower pins were removed on the 5th, and the upper one on the 6th of the month, perfect union having taken place. On the 26th he left the hospital.

*Strangulated Hernia. Reduction.*—Robert Clair, watchman, ætat. 66, entered September 30th, at half past 11 A. M., with a strangulated inguinal hernia of the right side. He states that he has been afflicted with a reducible hernia for the last fifteen years, and that he has during that time constantly worn a truss. At 6 o'clock this morning he removed this instrument while dressing, and found his rupture at once to descend. Being much pressed for time he did not attempt to return it till after he had walked upwards of half a mile, when he found that he was unable to do so. His bowels had not been moved for three days previously, and a physician who saw him before his admission, had administered a dose of castor oil, and bled him. Upon his entrance into the house, a hard tumour of the size of the fist was found descending into the scrotum. Gtt. lx. tinct. opii was given to him, and he was put into a warm bath, before and during which, efforts at the taxis were made. By these means the size of the tumour was reduced; hot fomentations were applied to the part after his removal from the bath, and another dose of oil, with gtt. xxx. tinct. opii, was administered. At two o'clock it run up upon being slightly handled, and a short time after his bowels were freely opened, and all pain was removed. A proper truss was afterwards applied, and on the 6th October he was discharged.

*Stone in the Bladder. Lithotripsy. Death.*—C. C., ætat. 23, entered August 22d, labouring under all the symptoms of stone in the bladder. The severe sufferings which this patient had for years endured had produced a state of mind bordering on imbecility, and no accurate history of his case could be procured from him. He was of a large frame though much emaciated. Lived in the country. Had travelled from the state of Connecticut to Philadelphia, a distance of 200 miles, and had, no doubt, during that time suffered many hardships. He was admitted into the hospital on the afternoon of his arrival in this city, and from the period of his entrance suffered at all times severely. After remaining quiet for some days on a regulated diet with the free use of mucilages, he was particularly examined. The urethra was found to be of a good size, very dilatable and free from stricture; no enlargement of the prostate existed, and the bladder was so dilatable as to allow him to retain his urine from a half to three quarters of an

hour. The stone was large, and the use of the sound caused him but slight uneasiness. The urine was abundant and deposited at all times a very thick tenacious mucus. Under these circumstances the case was judged to be a fit one for lithotripsy, but, previous to undertaking it, the patient was allowed to recover from the effects of his journey and become in a measure habituated to the air of the hospital.

*September 11th.* The patient having retained his urine for half an hour previously, a full sized Jacobson's instrument was introduced, and the stone seized and crushed. So little pain was caused by this, that after the withdrawal of the instrument the patient had no immediate desire to urinate, and stated ten minutes after the operation that he felt easier than he had been previous to the stone having been broken up. No chill or other unpleasant symptom followed, and on the afternoon of the day of its performance as well as on the following day (the 12th) a number of fragments were passed away with the urine.

*16th.* The instrument was again introduced and the stone at once grasped and effectually crushed.

*17th.* Passed a number of fragments this morning and during the night. An anodyne injection containing gtt. xl. tinct. opii., has been exhibited daily at noon since the period of the first operation, and pulv. doveri, grs. x., given at night; a general warm bath has also been used, and at such times as the patient has suffered an increase of pain, the warm hip bath has been resorted to; treatment continued.

*19th.* Suffered last night from a constant desire to urinate, and this morning passed a larger and more irregular fragment of stone than he has yet done; skin cool; appetite not so good.

*20th.* I introduced the brise-pierre, but, finding the bladder to contract violently, it was at once removed without having been opened. Anodyne enema, and hip bath.

*22d.* Sufferings in no way increased but there is almost entire loss of appetite; no fever; tongue clean. Sulph. quinine in solution was administered and the warm bath; pulv. doveri and anodyne enemas were continued.

*23d and 24th.* Appetite not improved, and there is great loss of strength; surface of body cool; hands and feet cold; pulse very feeble; tongue clean; has a more frequent desire to urinate, and more tenderness of the lower part of the abdomen than he has previously had; no tumidity of abdomen, the muscles of which are hard and contracted; urine clear and deposits a thick tenacious mucus, not, however, in larger quantity than it has previously done; bowels have been moved naturally. Heat to extremities and abdomen; anodynes and hip bath continued. Broth.

*25th.* Has taken very little nourishment within the last 24 hours; skin continues cool; is dull and listless; pulse 72 and very feeble; urine clear; lower part of belly is more painful when pressed upon. Warm poultice to abdomen; heat to extremities. Arrow root with wine and weak milk punch.

26th. He was less dull and had taken more nourishment but was exceedingly feeble; free, natural discharge from the bowels. Treatment continued.

27th. He was more dull than ever, but could be roused, and was free from delirium; the abdomen was more painful over its lower part than it had yet been, but there was no tumidity of it. Blister to abdomen. All nourishment refused except milk punch. Death at 9, p. m.

*Autopsy*, fifteen hours after death. Great emaciation; slight distension of the abdomen; the peritoneal coat of the intestines is inflamed, particularly towards the pelvis, and there is some effusion of puruloid serum in the cavity of it; the peritoneal covering of the abdominal muscles is also inflamed, but in a less degree than that of the intestines. The bladder which was strongly contracted was removed from the body and opened by an incision on its anterior part extending from the prostate to the fundus; another incision passing from the centre of this laid open a cyst, situated on the left side, capable of containing a large filbert, and communicating with the bladder by a small opening. Half an inch posterior to this opening, and about one inch



- A. Incision laying open the bladder from the prostate to the fundus.
- B. Incision perpendicular to the latter, laying open the smaller cyst.
- C. The larger cyst.
- D. Opening leading into the bladder.
- E. The ureter.

above the left ureter, a smooth, rounded and narrow opening (D) leading into another and much larger cyst (C) existed, the peritoneal covering of which was strongly adherent to the descending colon. The larger cyst contained thick dark coloured pus, and a portion of the lining membrane of the bladder was protruded through the opening into it. The coverings of the cyst were dark coloured, and softened to such an extent as to give way on being lightly handled after the bladder was taken out. Several small pouches formed by the protrusion of the mucous membrane between the fibres of the muscular coat were seen about the fundus of the bladder, in one of which a very small fragment of stone was found. The mucous coat was thickened and slightly reddened in spots, but was not softened.

The prostate was natural. The stone had been caught in its short diameter, near its centre, and thoroughly crushed, nearly one half of it having passed off. Only two fragments were found in the bladder, a small piece (G.) which had formed one end of the stone was lying behind the opening into the urethra, and the larger portion (F.) was lying at the fundus. The left kidney was enlarged



F. & G. Portions of stone found in the bladder.



to nearly twice its natural size and its pelvis contained a quantity of puruloid serum judged to be nearly 3i. in quantity. A cyst, capable of admitting the end of the thumb, existed in the lower part of the medullary substance and communicated with the pelvis of it. The left ureter in its whole length was much enlarged and thickened. The kidney of the right side was five inches long and two and a half wide at its middle; an incision made along its posterior part showed the cortical and tubular portions to be entirely absorbed in its upper half, while in the lower half, the tubular part had equally disappeared with a portion of the cortical, so that the whole kidney resembled a large cyst. The right ureter in its whole extent was similar to that of the left side, enlarged and thickened. The stomach, spleen, and pancreas were natural. The lungs were free from tubercles.

The difficulty of diagnosis in diseases of the kidney is well known; the above case affords another example of this, and shows that even great - destruction of these organs may occur without giving rise to any particular symptoms which make it known. The sufferings of the patient, though severe, were not greater than are usually attendant upon stone when of long standing and the case appeared in every way well adapted for lithotripsy. The fatal result can in no way, I think, be attributed to the operation, nor can it be advanced as an argument against the method employed. No force was used in the introduction of the instrument. The stone which was large was readily caught and crushed without producing pain; all the smaller fragments and sandy matter being subsequently passed off without difficulty. The mucous membrane of the bladder was not more inflamed than must be the case in every instance in which the disease is of long continuance. The opening leading into the cyst on the side of the bladder was small and would not have admitted the instrument made use of, even supposing it to be placed in the most favourable situation for entering it. The cyst had evidently long existed, being attached to the colon by old and firm adhesions, contained dark coloured pus and was in a state approaching to gangrene. The peritoneal inflammation which carried off the patient took its origin from this point and had probably followed ulceration of its internal coats.

An interesting case of aneurism, seated at the upper and outer part of the leg which came under notice and was cured by ligature of the femoral, will be reported hereafter.

*November, 1838.*